

WHAT IS CLAIMED IS:

1. A downward mechanism for support pins applied in a removable reactor, a bottom plate of the removable reactor having support pins standing
5 on bases, respectively, the bases having a larger diameter than that of the pins, the downward mechanism comprising:

an elevator;

a board fixed to the elevator at a fixed height, the board having holes to
accommodate the support pins, respectively, and at least a slit extending from
10 each of the holes, a size of each hole being sufficiently large to allow base to pass therethrough and a width of the slits being between a diameter of the support pins and that of the base.

2. The downward mechanism of claim 1, wherein the fixed height is
15 higher than a height of the base.

3. A downward mechanism for support pins applied in a removable reactor, a bottom plate of the removable reactor having support pins standing
on bases, respectively, the bases having a larger diameter than that of the pins,
20 the downward mechanism comprising:

an elevator;

a first board fixed to the elevator at a fixed height, a first side of the first board having first gaps; and

a second board fixed to the elevator at the fixed height, a first side of the
25 second board having second gaps respectively aligned with the first gaps to

form holes for respectively accommodating support pins and neighboring on the first board at a distance to form a slit between the first side of the first board and the first side of the second board, wherein a size of the holes is sufficiently large to allow the base to pass therethrough and a width of the slits is between a
5 diameter of the support pins and that of the base.

4. The downward mechanism of claim 3, wherein the fixed height is higher than a height of the base.